

# Peopleware

Many of the ideas in this notes and some of the text comes from the book *Peopleware* by Tom DeMarco and Tim Lister

# Brain Time verses Body Time

- Just because you are in your office (body time) does not mean you are effectively using your brain (brain time)
- Often body time  $>$  brain time
- Goal is to increase brain time to be as close as possible to body time

# Flow

- Mental state in which you are completely immersed
- Described as a super-concentration state
- Most productive state for intellectual workers
- *Flow: The Psychology of Optimal Experience* by Mihaly Csikszentmihalyi

# Sings of Flow

- No distracting thoughts
- Very focused concentration
- Time passes very quickly (look at the clock and wonder where your day went)

# Examples of Flow

- Physical: sports, crafts
- Interpersonal: conversations
- Intellectual: solving difficult problems, programming

# In and out of Flow (1)

- It only takes an instant to exit a state of flow
  - Phone rings
  - E-mail
  - Someone comes to your office
  - Distracting event in your office (someone else's phone, someone walking by, etc)

# In and out of Flow (2)

- It can take considerable time to get into a state of flow
- Called *reimmersion time*
- Depends on task and level of interruption
  - 5 minutes if interruption is related to task
  - 5 hours if interruption is highly emotional

# An Endless State of non-Flow

- Assume it takes you 15 minutes to get into a state of flow
- Assume your phone rings every 15 minutes and you talk for 1 minute (25 minutes/8-hour day)
- How much time do you spend in a state of flow?
  - Virtually none

# Flow Exercise

- What are some intellectual activities in which you need to be in a state of flow to be productive?
- How long does it take you to get into a state of flow?
- Do you ever fail to return to a state of flow?
- What interrupts you?

# The Telephone

- Telephone protocol is unproductive
- Telephones make noise until you answer them
  - For most phones, the only way to make it stop is to answer it
- Everyone expects you to stop what you are doing and answer your phone (especially in a work environment)

# Worst Case Telephones

"It has come to my attention that many of you, when you are busy, are letting your phones ring for three rings and thus get switched over to one of the secretaries. With all those interruptions, the secretaries can never get any productive work done. The official policy here is that when you're at your desk you will answer your phone before the third ring." --unnamed manager

# Telephones and Flow

- Organizations must adopt telephone policies that help maximize flow
  - Procedural
    - No call periods
    -
  - Technological
    - Caller ID
    - Voice mail

# Telephone Procedures

- Use e-mail instead
- Telephone only when necessary
- Telephone “office hours”
- General communication rules

# Telephone Technology

- Caller ID
- Voicemail
- Ring once then stop
- Reject button
- Text subject of call

# Bring Back the Door

- Many software companies force workers to work in large rooms filled with cubicals
- Intellectual workers need quiet and need to be able to limit distractions so they can maximize their time in a state of flow
- Software organizations need to bring back the private office

# Music and Productivity

- Does listening to music increase or decrease productivity?
- Does it improve the quality of code?
- Do you listen to music when you write code?

# Music and Productivity (2)

- Music is processed by the right side of your brain
- Serial processing center of the left brain is used for many work tasks
- Creative insight comes from the right side
- If you listen to music while coding, the creative part of your brain is busy processing music instead of programming

# The Right People

- What do you think is the most important factor that determines the success of a software project?
  - The final outcome of any effort is more a function of who does the work than how the work is done.
  - Yet software engineering pays little to no attention to hiring and keeping the right people.

# The Right People (2)

- For most efforts, success or failure is in the cards from the moment the team is formed and the initial directions set out. With talented people, the manager can almost coast from that point on.
- Does this mean that a manager can take any group of people and *form* them into a successful team? NO!

# Managers Don't Change People

- Managers are unlikely to change their people in any meaningful way.
- People usually don't stay put long enough and a manager does have enough leverage to make a significant difference.
- While a good manager can bring out the best in people, if the person's best isn't very good, the manager is unlikely to make them better.

# Living With Who You Have

- This isn't a very American way of thinking.
- Much of American culture is based around the idea of "do your best, that's all you can do."
- Companies basically must accept their poor performers (they would probably lose a large lawsuit if they fired them).
- "You don't go to war with the army you want, you go to war with the army you have."

# The Alternative: Hire “Good” People

- If you are going to get stuck with the people you hire, it is very important to hire good people
- Some organizations realize this and spend tremendous effort on the hiring process (e.g. student summer intern programs)
- Other companies are so desperate to hire, they will hire the best they can find, even if that person is not very good

# The Uniform Plastic Person

- Organizations often encourage hiring people that look and sound like everyone else
- This need for uniformity is a sign of management insecurity (strong managers don't care about appearance, they care about capabilities)
- Most hiring mistakes results from too much emphasis on appearance and not enough on capabilities

# Corporate Dress Code

- “A corporation that has a formal standard of appearance is in the last stages of brain death”
- Forcing employees to wear uncomfortable clothes lowers moral and reduces productivity
- It is a sign of management insecurity

# Hiring a Juggler

During a job interview for a juggler, the manager asked the juggler all sorts of questions about juggling. What could he juggle? How many things could he juggle? Did he tell funny stories when he juggled? At the end of the interview he asked the juggler if he had any questions. The juggler asked, “Don't you want to seem me juggle?”

# Hiring a Computer Scientist

- Many organizations hire people without every checking to see if they can do their job
- Why is this?

# Evaluating Technical People

- Portfolio of projects
- Aptitude tests
  - Technical
  - General (light bulbs & manhole covers)
- Hold an audition (do what we are hiring you to do)

# Hiring the Right Person

- If you were in charge of hiring, what would you do to make sure you hired the right person for the job at hand?

# Hiring Bottom Line

- Hiring is very important
- Must do whatever you have to in order to evaluate perspective employees
- Job seekers must be prepared to be evaluated
  - It damages your career to be hired into a position in which you are not proficient

# Methodology Madness

- Suppose you can't hire strong people
  - Experience and skills you need
  - Strong learners
  - People with good interpersonal skills
- It does not matter if you have the right Methodology

# Methodology

- A general systems theory of how a whole class of thought intensive work ought to be conducted
- An attempt to centralize thinking
  - This implies that the project people are not smart enough to do any thinking
- Usually described in an expensive and very long book that specifies the steps (regardless of who is doing the work)

# Methodology (2)

- It does not matter if you can't hire good people
- If you have the “right” methodology everything will be all right
- The people who create a Methodology are smart. Just follow the steps and any group of people can accomplish anything

# Methodology Madness

- A methodology cannot make an incompetent group of people competent
- What really happens is that everyone follows the methodology and spends all their time writing documentation
- **People lose the ability to distinguish between activity and productivity**

# Good methodology

- Not all methodologies are bad
- There are good ideas (often called “best practices”) that have proven value
- But buyer beware! Don't assume a

**M**ethodology can solve all your problems and turn your coal into diamonds.